REPORT OF ALBERTA'S ENDANGERED SPECIES CONSERVATION COMMITTEE

JUNE 2004

ISBN No. 0-7785-4135-5 (Printed Edition)
ISBN No. 0-7785-4136-3 (On-line Edition)
Pub No. I/226 (Printed, On-line Edition)

For copies of this report, contact:

Information Centre – Publications
Alberta Environment / Alberta Sustainable Resource Development
Main Floor, Great West Life Building
9920 - 108 Street
Edmonton, Alberta
Canada
T5K 2M4
Telephone: (780) 422-2079

OR, visit our website at

<http://www3.gov.ab.ca/srd/fw/speciesatrisk/>

and select button 'Legal Designation'

WRITING/EDITING: Robin Gutsell, Lisa Matthias, Edrea Daniel, Sarah Holt, Gordon Court, Dave Ealey, John Lear

GRAPHIC DESIGN & LAYOUT: Broken Arrow Solutions Incorporated

This publication may be cited as: Fish and Wildlife Division 2005. Report of Alberta's Endangered Species Conservation Committee: June 2004. Alberta Sustainable Resource Development, Fish and Wildlife Division, Edmonton, AB. 36 pp.

106-06926/

Message from the Minister

Since the earliest days of our province, Albertans have valued our fish and wildlife resources.

Alberta remains committed to conserving our wild species and pays particular attention to those that may be at risk. The steady progress made by the Endangered Species Conservation Committee exemplifies Alberta's leadership in conserving vulnerable species.

The 2004 Endangered Species Conservation Committee Report highlights the committee's many successes. Important advances in recovery planning and implementation particularly include the creation of recovery plans for piping plover, western blue flag and peregrine falcon – the first provincial recovery plans to be reviewed by the committee. The report also emphasizes the importance of outreach and education, co-operation and stewardship by all Albertans. Stewardship efforts help prevent species from becoming at risk and contribute significantly to provincial recovery work.

I commend the committee and scientific subcommittee members for their outstanding commitment. Over the last seven years, they have provided my Ministry with high quality information and prudent recommendations that help us develop effective regulations, policies and programs for managing species at risk. They represent many sectors and bring together a broad range of values held by Albertans.

I sincerely appreciate the leadership of Ivan Strang, MLA, West Yellowhead, who has served as Chairman since the committee was established. With the support of committee members, Mr. Strang has worked with scientists and stakeholders to provide expert advice on Alberta's vulnerable wildlife.

Albertans expect us to take the balanced approach in our efforts to ensure natural resources are used and managed sustainably. They expect us to use this same approach when it comes to the well being of our sensitive wild species. I look forward to continuing to work with the committee to achieve this balance.

DAVID C. COUTTS

HON. DAVID COUTTS
MINISTER OF SUSTAINABLE RESOURCE DEVELOPMENT WITH PEREGRINE FALCON NESTLING

"Alberta remains committed to conserving our wild species and pays particular attention to those that may be at risk."

IVAN STRANG
MLA WEST YELLOWHEAD

Message from the Chair

I feel privileged to represent the diverse membership of the Endangered Species Conservation Committee (ESCC) in introducing this third progress report on species at risk activities. This is one way in which we can be accountable to Albertans for our efforts on their behalf.

It's very satisfying to help build something and watch it stand the test of time. As a result of start-up funding for a number of species at risk initiatives, the government of Alberta established, over a couple of years, a strong framework for its species at risk programming. This framework has enabled the committee to make a good number of recommendations and make headway toward recovery of species. The proof is in the success stories described herein.

The Alberta approach adapts, for use at a regional level, the assessment criteria that are used at national and international (World Conservation Union) levels. Based on these criteria, the Scientific Subcommittee supports the ESCC with independent, scientific assessments of a high calibre. Then the ESCC, as a stakeholder committee unique in all of Canada, takes these assessments and adds value, not special interest. We then submit our recommendations to the Minister of Sustainable Resource Development.

In communicating with the Minister, the committee has been impressed with his willingness to listen to our points and to consider fully our submissions. I am pleased to note that well over 90 per cent of the recommendations submitted by the ESCC have been accepted, which is a most impressive record. We are ready to work with the Minister and the department toward fulfilling our mandate as we address further species.

My thanks go to the hard-working committee members and Scientific Subcommittee members. Your commitment to this task of bettering the condition of Alberta's "at risk" species is unwavering. Albertans and the species themselves are well served by your efforts.

IVAN STRANG

"The Scientific Subcommittee supports the ESCC with independent, scientific assessments of a high calibre. Then the ESCC takes these assessments and adds value."

Alberta and Its Species at Risk

SMALL-FLOWERED SAND-VERBENA • THREATENED STATUS RECOMMENDED BY THE ESCC

Alberta has a rich natural heritage. The province has hundreds of species of vertebrate animals, and thousands of species of plants and invertebrates, whose populations are healthy and stable. However, the populations of some wild species have declined to such an extent that they can no longer sustain themselves. Other species are in danger of reaching this point.

In response, the Alberta government has developed a process to prevent "species at risk" from becoming extinct or extirpated. The approach is innovative and practical, and brings broad social and economic values into the process. It is also cooperative and collaborative, with the solid backing of provincial legislation (the *Wildlife Act*). The process relies on sound science plus a realistic understanding of land use and land management, both of which are needed for the effective management and recovery of species at risk.

The Alberta approach relies upon the activities of the Endangered Species Conservation Committee (ESCC) and its scientific arm, the Scientific Subcommittee, both created under the auspices of the *Wildlife Act* in 1998.

The main role of the ESCC is to advise the Minister of Sustainable Resource Development on matters related to the identification, conservation and recovery of species at risk in Alberta. The Policy Statement of the ESCC is provided in the Appendix 1. The specific functions of the ESCC are as follows:

- to recommend the necessary legal designation and protections for threatened and endangered species in Alberta;
- to facilitate the planning and implementation of conservation programs and recovery plans for species at risk; and
- to recommend actions that will prevent species from becoming at risk in the future.

The Scientific Subcommittee is an independent subcommittee of the ESCC. Its purpose is to study the scientific information available on species identified as potentially at risk in Alberta. The Scientific Subcommittee provides the ESCC with its analysis of the biological status of a wild species and recommends an appropriate status designation. The Scientific Subcommittee may also suggest immediate actions that need to be taken to protect the species. The ESCC considers and includes the subcommittee's assessment when it submits its advice to the Minister of Sustainable Resource Development.

The creation of the ESCC has added a new dimension to the ongoing process of species assessment carried out in Alberta. The result has been clear identification of species at risk and the timely development of recovery plans and management programs for these species.

Definitions Used by the Endangered Species Conservation Committee

Species at Risk: A species at risk of extinction or extirpation (endangered or threatened), or a species that needs special management attention to prevent it from becoming at risk.

Extinct: A species that no longer exists.

Extirpated: A species no longer existing in the wild in Alberta but occurring elsewhere in the wild.

Endangered: A species facing imminent extirpation or extinction.

Threatened: A species likely to become endangered if limiting factors are not reversed.

Species of Special Concern: A species of special concern because of characteristics that make it particularly sensitive to human activities or natural events.

Data Deficient: A species for which there is insufficient scientific information to support status designation.

These definitions are based on those used by The Committee on the Status of Endangered Wildlife in Canada (COSEWIC - see page 16). For more information see the COSEWIC website <http://www.cosewic.gc.ca>.

NORTHERN LEOPARD FROG BREEDING POND

Alberta's Strategy to Protect Species at Risk

The Endangered Species Conservation Committee (ESCC) is part of an overall process of wild species conservation in Alberta that incorporates both provincial and national goals and strategies.

In Alberta, those species potentially at risk of extinction or extirpation are first identified through a process managed by the Fish and Wildlife Division (Alberta Sustainable Resource Development), which ranks the general status of each Alberta species. The purpose of this "coarse filter" process is to assign initial priorities for species assessment, data collection and species management. The Fish and Wildlife Division publishes reports on the general status of Alberta wildlife every five years. The next edition is to be completed in 2005 (see the box below for how to get your copy of the 2000 report).

If a species has been identified as being at risk, the Fish and Wildlife Division and Alberta Conservation Association jointly prepare a detailed Alberta status report. Using this report, and any relevant additional information, the Scientific Subcommittee of the ESCC then assesses what the risk of extinction or extirpation is for that species in Alberta. In this process, the national Committee on the Status of Endangered Wildlife in Canada (COSEWIC) rating (see page 10) for the species is considered, but Alberta's assessment may differ because it is related only to the status of the species within the province.

The information gathered by the Fish and Wildlife Division, is used by the Scientific Subcommittee to prepare an evaluation, which is presented to the ESCC. The committee then decides what recommendations to make to the Minister of Sustainable Resource Development concerning the legal designation, management, and recovery of the species.

If a species is legally designated under the *Wildlife Act*, the Minister of Sustainable Resource Development will prepare a recovery plan for the species. The role of the ESCC in this process is as follows:

- to identify appropriate stakeholders to assist scientists in preparing the recovery plan;
- to review and provide advice on a draft plan; and
- to facilitate appropriate public review of, and input into, a recovery plan.

A document called an *Initial Conservation Action Statement* briefly summarizes the recommendations of the ESCC concerning actions that should be taken by Alberta to conserve a species, including immediate actions needed while a recovery plan is being put in place. By signing the federal/provincial/territorial Accord for the Protection of Species at Risk in 1996 (see page 10) [where the Accord is mentioned in the "What

Initial Conservation Action Statements: What They Contain

1. Species description.
2. Alberta status (and rationale for status rating) as assessed by the Scientific Subcommittee of the ESCC.
3. Initial conservation responses recommended by the ESCC, including
   - legal designation recommended by the ESCC and a brief statement of the rationale; and
   - action and resources needed for conservation efforts.

Where Alberta Species at Risk, Detailed and General Status Reports Are Available

Edmonton
Information Centre - Publications
Alberta Sustainable Resource Development
Main Floor, Great West Life Building
9920 - 108 St.
Edmonton, Alberta, Canada T5K 2M4

Phone: (780) 944-0313;
within Alberta use the Rite Line 310-0000
Fax: (780) 427-4407
E-mail: srd.infocent@gov.ab.ca

OR

< http://www3.gov.ab.ca/srd/fw/speciesatrisk/ >

Happens at the National Level?" section], Alberta committed to the prompt development of recovery plans—within one year [from the time the species is officially designated] for endangered species and within two years for threatened species. An *Initial Conservation Action Statement* is implemented immediately upon approval by the Minister of Sustainable Resource Development.

In keeping with commitments made under the Accord, Alberta must also prevent species from becoming at risk. This preventative action is less costly than recovering endangered or threatened species. The ESCC also recommends management strategies to the Minister of Sustainable Resource Development that will prevent a species from becoming at risk. Thus far, assessed species that are not at immediate risk of extinction or extirpation, but still require special management and/or additional data collection have been identified as "species of special concern" or "data deficient."

NEW SPECIES ENTER THE PROCESS HERE
Status of Alberta Wildlife Report
General Status Assessment
At Risk or May Be At Risk
Recovery Implementation
REASSESSMENT ON A REGULAR BASIS
Recovery Team Recovery Plan
Prevention: Species/Ecosystem Management
Data Collection
Detailed Status Report
Recovery Planning by RecoveryTeam
SSC: Biological Assessment
Wildlife Act List of Endangered and Threatened Species
Endangered or Threatened
Species of Special Concern
Data Deficient
ESCC: Evaluation and Recommendations
Decision and Action by Minister of Sustainable Resource Development
Process
Outcome or Publication
Decision Point

ESCC = Alberta's Endangered Species Conservation Committee
SSC = Scientific Subcommittee

Species that go through the detailed status process and are found to be "Not At Risk" are identified for general management and regular general status assessment.

Protection for Endangered and Threatened Species[1] Under Alberta's *Wildlife Act*

1. Protects nests and dens of both threatened and endangered species throughout the year.
2. Provides penalties for killing or trafficking in endangered and threatened species (up to $100 000 fine and/or two years in jail).
3. Designated non-game species also receive some specific protections.

[1] currently, automatic protections apply only to non-fish vertebrates. To list plants, invertebrates and fish, similar protection must be specified by development of new regulations, which is underway.

WHOOPING CRANE
ENDANGERED STATUS IN ALBERTA

For more information about these organizations, visit their websites, which are listed on the inside back cover.

Alberta's Endangered Species Conservation Committee

Alberta's Endangered Species Conservation Committee (ESCC) held its first meeting in September 1998. Meeting quarterly, it makes decisions usually by consensus but can resolve matters using a two-thirds majority when consensus is not possible. A Minister of the then-Alberta Environmental Protection appointed Ivan Strang, MLA for West Yellowhead, as the committee's Chair in 1998.

The Alberta approach to assisting species at risk involves using both scientific expertise and the knowledge of those who own, manage or use the land on which wild species depend. Therefore, the ESCC includes members of the scientific/academic community (apart from the Scientific Subcommittee), plus representatives of organizations that are land use managers, resource users, conservation groups and government departments. By including all these stakeholders, the committee is better able to develop workable conservation management programs and recovery plans for species at risk.

The ESCC consists of the following individuals and organizations (member organizations are listed in alphabetical order):

Chair
Ivan Strang, MLA for West Yellowhead

Members
Alberta Association of Municipal Districts and Counties
Alberta Beef Producers
Alberta Fish and Game Association
Alberta Forest Products Association (2 MEMBERS)
Alberta Irrigation Projects Association
Alberta Native Plant Council
Alberta Sustainable Resource Development
Calgary Zoo
Canadian Association of Petroleum Producers
Federation of Alberta Naturalists
Special Areas Board
The Wildlife Society - Alberta Chapter
Treaty 8 First Nations of Alberta
University of Alberta (Dept. of Biological Sciences)
University of Calgary (Dept. of Biological Sciences)
Western Stock Growers' Association

Ex-officio Representatives/Advisors
Alberta Agriculture, Food and Rural Development
Alberta Community Development
Alberta Conservation Association
Alberta Energy
Alberta Environment

Ex-officio Representatives do not vote. All other members have one vote.

ENDANGERED SPECIES CONSERVATION COMMITTEE MEMBERS AT EDMONTON MEETING IN JUNE, 2005

Achievements of Alberta's Endangered Species Conservation Committee

Alberta's Endangered Species Conservation Committee has been meeting since September 1998 and has accomplished a great deal in its tenure so far. Between July 2002 and June 2004, it has achieved the following:

- received 14 new assessments carried out by the Scientific Subcommittee (as of June 2004, 44 species have been evaluated since 1999);
- passed recommendations concerning the legal designation, management and recovery of all of these species to the Minister of Sustainable Resource Development (the Minister has responded and initiated action on all 44 species); and
- reviewed and facilitated public input into one draft recovery plan.

Future Activities of Alberta's Endangered Species Conservation Committee

In the next two years Alberta's Endangered Species Conservation Committee intends to accomplish the following:

- continue ongoing assessments of species potentially at risk in Alberta and make its recommendations about these species to the Minister of Sustainable Resource Development;
- continue to facilitate the planning, review and implementation of recovery plans for endangered and threatened species; and
- continue to review and facilitate public input into draft recovery plans.

SPECIES ASSESSED BY ALBERTA'S ENDANGERED SPECIES CONSERVATION COMMITTEE BETWEEN JULY 2002 AND JUNE 2004

ENDANGERED SPECIES

1 | Bison *(Bison bison)*

THREATENED SPECIES

1 | Northern leopard frog *(Rana pipiens)*

SPECIES OF SPECIAL CONCERN

1 | White-winged scoter *(Melanitta fusca deglandi)*
2 | Prairie falcon *(Falco mexicanus)*

DATA DEFICIENT SPECIES

1 | American badger *(Taxidea taxus)*

IN PROCESS[1]

1 | Lake Sturgeon *(Acipenser fulvescens)*
2 | Willow Flycatcher *(Empidonax traillii)* [2]
3 | Western silvery minnow *(Hybognathus argyritis)*
4 | Shortjaw cisco *(Coregonus zenithicus)*
5 | Small-flowered sand-verbena *(Tripterocalyx micranthus)*
6 | Mountain plover *(Charadrius montanus)*
7 | Banff Springs snail *(Physella johnsoni)*
8 | St. Mary sculpin *(provisionally Cottus bairdi punctulatus)*
9 | Stonecat *(Noturus flavus)*

[1] New regulations for the protection of plant, fish and invertebrate species are being developed so that the listing process can be completed for these species.

[2] Evaluation on hold pending collection of additional population data.

GRIZZLY BEAR
THREATENED STATUS RECOMMENDED BY THE ESCC

The Scientific Subcommittee of Alberta's Endangered Species Conservation Committee

The Scientific Subcommittee is made up of independent scientists who review the best scientific information available on a species that may be at risk in Alberta.

The Scientific Subcommittee is made up of independent scientists who review the best scientific information available on a species that may be at risk in Alberta and assess what the biological status of that species is in the province. The subcommittee sends its assessment and related recommendations to the Endangered Species Conservation Committee.

The Scientific Subcommittee has adopted the species evaluation method used by the IUCN[1] (now the World Conservation Union, formerly the International Union for the Conservation of Nature and Natural Resources). This method is the same as that used by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) at the national level, and using it ensures that Alberta's assessments can be compared with those done nationally. As well, having an internationally accepted, open and transparent process of evaluation enhances the credibility of the scientific assessments.

When evaluating a species, the Scientific Subcommittee considers a range of information about the species' status in Alberta. Population size, changes in population size, and the size of the area in which the species occurs are very significant. Other population characteristics, such as fragmentation, isolation and status in adjacent regions are also considered before the subcommittee recommends a status.

The present Scientific Subcommittee is composed of a small group of scientists with significant expertise related to vertebrate animals (including mammals, amphibians, reptiles, birds and fish), invertebrates (including insects and spiders) and vascular and nonvascular plants, as well as in the general fields of biology, botany, ecology, forestry, population genetics, wildlife management and wildlife conservation.

Members of the Scientific Subcommittee (in alphabetical order) are as follows:

Dr. René J. Belland, Director of Research, Devonian Botanic Garden, Edmonton, Alberta.

Dr. David Gummer, Curator of Mammalogy, Provincial Museum of Alberta, Edmonton, Alberta.

Dr. Brett Purdy, Department of Renewable Resources, University of Alberta, Edmonton, Alberta.

Dr. Fiona Schmiegelow (Subcommittee Chair from 1999-2004), Assistant Professor, Department of Renewable Resources, University of Alberta, Edmonton, Alberta.

Dr. John Spence, Professor, Department Chair, Department of Renewable Resources, University of Alberta, Edmonton, Alberta.

Mark Steinhilber, Head Curator of Life Sciences, Provincial Museum of Alberta, Edmonton, Alberta.

William D. Wishart, Retired Section Head, Wildlife Research, Alberta Fish and Wildlife; now Adjunct Professor, Department of Biological Sciences, University of Alberta, and Research Associate, Provincial Museum of Alberta, Edmonton, Alberta.

*Dr. René Belland is the current Subcommittee Chair; Dr. Colleen Cassady St. Clair, Associate Professor, Behavioural Ecology, Department of Biological Sciences, University of Alberta, Edmonton, Alberta, joined the Subcommittee in 2005.

[1] The World Conservation Union has kept its former acronym—IUCN.

Achievements of the Scientific Subcommittee of Alberta's Endangered Species Conservation Committee

The Scientific Subcommittee has been meeting since January 1999 and between July 2002 and June 2004, can be credited with the following accomplishments:

- evaluated 14 new species (as of June 2004, 44 species have been evaluated since 1999) and provided its recommendations for these species to the Endangered Species Conservation Committee;
- discussed and accepted new guidelines for using IUCN 2001 Categories and Criteria; and
- recommended priorities for reassessment of the first set of species to approach 5-years since initial assessment.

WRITING-ON-STONE PROVINCIAL PARK

Future Activities of the Scientific Subcommittee of Alberta's Endangered Species Conservation Committee

Over the next two years, the Scientific Subcommittee will be completing the following activities:

- continue to evaluate species potentially at risk in Alberta and pass on its recommendations to the Endangered Species Conservation Committee; and
- continue to set priorities for reassessment of species as they approach 5-years since their initial assessment.

RICHARD CANER

What Happens at the National Level

There are two key cooperative processes that have driven endangered species conservation efforts nationally over the last few decades. One is the Committee on the Status of Endangered Wildlife in Canada (COSEWIC), created in 1977. This committee, which includes government, academic and nonacademic experts, identifies wild species at risk in Canada.

In addition, the committee on the Recovery of Nationally Endangered Wildlife (RENEW) was created in 1988. This committee oversees the development and implementation of recovery plans for species identified as "threatened" or "endangered" nationally. Alberta participates on most national recovery teams for COSEWIC-designated species at risk that occur in the province.

The federal/provincial/territorial *Accord for the Protection of Species at Risk*, which Alberta signed in 1996, committed federal, provincial and territorial governments to increased cooperation and action on the conservation of species at risk. The formation of the Endangered Species Conservation Committee was one of the means by which Alberta began to meet its commitments under the Accord.

There have been a number of recent advances at the national level in the area of Species at Risk. After several years under development, the *Species at Risk Act* (SARA) was proclaimed into law on June 5, 2003, with several provisions coming into effect June 1, 2004.

Key components of this new federal legislation include the following:

- national assessment by COSEWIC and federal listing under SARA (see below);
- basic protections against killing, possession, trafficking, destruction of residences;
- critical habitat designation and protection;
- recovery planning and consultation (see below); and
- permitting of activities affecting a listed wildlife species, or its critical habitat or residence.

With proclamation of SARA, COSEWIC was created in law, as an independent body of experts responsible for assessing and identifying species at risk. Assessments made by COSEWIC will be reported to the Federal Minister of the Environment and to the Canadian Endangered Species Conservation Council.

The Federal Minister is required to prepare a recovery strategy and action plan(s) for each nationally endangered, threatened or extirpated species. Management plans must be developed for Species of Special Concern. The RENEW will continue to guide the recovery process.

The ESCC remains very interested in seeing how provincial/federal integration and cooperation will occur. The new legislation will create some challenges that will have to be met with creative solutions. No matter what challenges arise, Alberta remains committed to the *Accord for the Protection of Species at Risk*, and continues to support the cooperative approach of the Accord. This cooperative approach is the foundation for how the ESCC works, and has proved its worth for species at risk.

Some Helpful Websites

PROVINCIAL

Alberta's Species at Risk Program (INCLUDING REPORTS)
http://www3.gov.ab.ca/srd/fw/speciesatrisk/

Alberta Natural Heritage Information Centre
www.cd.gov.ab.ca/preserving/parks/anhic/flashindex.asp

NATIONAL

Federal Species at Risk Act Public Registry (SARA)
www.sararegistry.gc.ca/default_e.cfm

Committee on the Status of Endangered Wildlife in Canada (COSEWIC)
www.cosewic.gc.ca

Accord for the Protection of Species at Risk
http://www.ec.gc.ca/press/wild_b_e.htm

Species at Risk in Canada
www.speciesatrisk.gc.ca

INTERNATIONAL

World Conservation Union (IUCN)[1]
http://iucn.org/themes/ssc/index.htm

[1] The World Conservation Union has kept its former acronym— IUCN.

Species Currently Listed Under the *Wildlife Act*, and New Species Assessed by the Endangered Species Conservation Committee since it's Inception in September 1998

Species	Former Designation (1998)	Recommendations SSC	Recommendations ESCC	Current Designation (June 2002)	Recovery Team Formed	Recovery/ Management Plan Drafted	Rec. Plan Approved by Minister
ENDANGERED (2004)							
Sage grouse (*Centrocercus urophasianus*)	GA	EN Jun-99	EN Jul-99	EN	(Ntl)[2] Nov-97 (Prov) Jan-03[2]	(Ntl) Aug-01 *IP*	(Ntl) Sep-01
Swift fox (*Vulpes velox*)	EN	EN Oct-99	EN Oct-99	EN	*IP*		
Piping plover (*Charadrius melodus*)	TH	EN Dec-99	EN Jan-00	EN	Jul-01	Feb-02	Apr-02
Ord's kangaroo rat (*Dipodomys ordii*)	NG	EN Mar-00	EN Apr-00	EN	Apr-03	*IP*	
Whooping crane (*Grus americanus*)	EN	EN Sep-01	EN Oct-01	EN	*NA*		
Bison (*Bison bison*)[1]	EN	EN Jan-04	EN Feb-04	EN			
THREATENED (2004)							
Peregrine falcon (*Falco peregrinus*)	EN	TH Jun-99	TH Jul-99	TH	May-01	Jun-04	*IP*
Burrowing owl (*Athene cunicularia*)	TH	TH Oct-99	TH Oct-99	TH	Jun-01	*IP*	
Woodland caribou (*Rangifer tarandus caribou*)	TH	TH Dec-00	TH Jan-01	TH	Oct-02	Jun-04	
Barren ground caribou (*Rangifer tarandus groenlandicus*)	TH	-	-	TH	*NA*		
Trumpeter swan (*Cygnus buccinator*)	TH	TH Apr-01	TH Jun-01	TH	Apr-03	*IP*	
Ferruginous hawk (*Buteo regalis*)	TH	Sep-01	Oct-01	TH◆◆			
Northern leopard frog (*Rana pipiens*)	TH	TH Sep-03	TH Nov-03	TH	*IP*		
OTHER FORMS OF PROTECTION PROPOSED (2000-2004)							
Sprague's pipit (*Anthus spragueii*)	NG	SC Jun-99	SC Jul-99	NG(SC)◆	*NA*	*IP*	
Long-toed salamander (*Ambystoma macrodactylum*)	NG	SC Dec-99	SC Jan-00	NG(SC)◆	*NA*	*IP*	
Long-billed curlew (*Numenius americanus*)	NG	SC Mar-00	SC Apr-00	NG(SC)◆	*NA*	*IP*	
Loggerhead shrike (*Lanius ludovicianus*)	NG	SC Mar-00	SC Apr-00	NG(SC)◆	*NA*		
Black-throated green warbler (*Dendroica virens*)	NG	SC Jun-00	SC Oct-00	NG(SC)◆	*NA*	*IP*	
Harlequin duck (*Histrionicus histrionicus*)	GA	SC Sep-01	SC Oct-01	GA(SC)◆	*NA*		
Bull trout (*Salvelinus confluentus*)	GF	SC Jan-02	SC Feb-02	GF(SC)◆	*NA*		
White-winged scoter (*Melanitta fusca deglandi*)	GA	SC Sep-02	SC Oct-02	GA(SC)◆	*NA*		
Prairie falcon (*Falco mexicanus*)	BP	SC Jan-03	SC May-03	BP(SC)◆	*NA*		
Prairie rattlesnake (*Crotalus viridis*)	NG	DD Dec-99	DD Jan-00	NG(DD)◆	*NA*	*IP*	
Wolverine (*Gulo gulo*)	FB	DD Dec-00	DD Jan-01	FB(DD)◆	*NA*		
Pygmy whitefish (*Prosopium coulteri*)	-	DD Sep-00	DD Oct-00	DD	*NA*		
Great plains toad (*Bufo cognatus*)	NG	DD Dec-00	DD Jan-01	NG(DD)◆	*NA*		
Canadian toad (*Bufo hemiophrys*)	NG	DD Dec-00	DD Jan-01	NG(DD)◆	*NA*		
American badger (*Taxidea taxus*)	FB	DD Sep-02	DD Oct-02	FB(DD)◆	*NA*		
Red-tailed chipmunk (*Tamias ruficaudus*)	NG	NR Jun-00	NR Oct-00	NG	*NA*		
IN PROCESS (JUNE 2004) (E.G., AWAITING REGULATION DEVELOPMENT)							
Western spiderwort (*Tradescantia occidentalis*)	-	EN Apr-01	EN Jun-01	*IP*	Oct-03	*IP*	
Soapweed (*Yucca glauca*)	-	EN Apr-02	EN May-02	*IP*	Oct-03	*IP*	
Yucca moth (*Tegeticula yuccasella*)	-	EN Apr-02	EN May-02	*IP*	Oct-03	*IP*	
Western blue flag (*Iris missouriensis*)	-	TH Sep-99	TH Oct-99	*IP*	Nov-01	Feb-02	Apr-02
Grizzly bear (*Ursus arctos*)	GA	TH Jan-02	TH Feb-02	*IP*	Oct-02	*IP*	
Cape May warbler (*Dendroica tigrina*)	NG	SC Apr-02	SC May-02	*IP*			
Bay-breasted warbler (*Dendroica castanea*)	NG	SC Apr-02	SC May-02	*IP*			
Lake Sturgeon (*Acipenser fulvescens*)	GF	TH Jan-03	TH May-03	*IP*			
Willow Flycatcher (*Empidonax traillii*)	NG	Sep-02	Oct-02	-◆◆			
Western silvery minnow (*Hybognathus argyritis*)	BF	TH Jan-03	TH May-03	*IP*	Mar-04		
Shortjaw cisco (*Coregonus zenithicus*)	-	TH Jan-03	TH May-03	*IP*			
Small-flowered sand-verbena (*Tripterocalyx micranthus*)	-	TH Sep-03	TH Nov-03	*IP*			
Mountain plover (*Charadrius montanus*)	NG	EN Jan-04	EN Feb-04	*IP*			
Banff Springs snail (*Physella johnsoni*)	-	EN Jan-04	EN Feb-04	*IP*	*NA*		
St. Mary sculpin (provisionally *Cottus bairdi punctulatus*)	-	TH Jan-04	TH Feb-04	*IP*	Mar-04		
Stonecat (*Noturus flavus*)	-	TH Apr-04	TH Jun-04	*IP*	Mar-04		

EN – Endangered; **TH** – Threatened; **BF** – Bait Fish (under Federal Fisheries Act); **GA** – Game Animal; **NG** – Non-game Animal; **GF** – Game Fish (under Federal Fisheries Act); **FB** – Fur-bearing Animal; ***IP*** – In Process (former designations hold while in process); ◆ – Legal designation is Non-game Animal, Fur-bearing Animal, Game Bird or Game Fish, species further described as **SC** – Species of Special Concern or **DD** – Data Deficient; ◆◆ – Evaluation/Re-evaluation on hold pending analysis of additional data on population trends; **NR** – Not at Risk; **NA** – not applicable.

[1] Currently, only bison (*Bison bison*) that are found, killed or captured on the land within the boundaries described in Alberta's *Wildlife Regulation* are endangered animals.

[2] Pending development of the provincial recovery plan, Alberta has adopted the national recovery strategy for sage grouse.

GORDON COURT

PEREGRINE FALCON
THREATENED STATUS IN ALBERTA

Recovery Planning

One of the most important components of Alberta's Species at Risk Program is the development and implementation of recovery plans for species that are designated as "threatened" or "endangered." Alberta recovery plans are prepared by recovery teams composed of a variety of stakeholders, often including representatives of government agencies, conservation organizations, industry, landowners, resource users, and universities.

Once a draft recovery plan is completed, it is forwarded to the Endangered Species Conservation Committee (ESCC) for review. The ESCC then forwards recommendations and advice on implementation and recovery actions to the Minister of Sustainable Resource Development. After ministerial approval, a public information session is held. Plans accepted and approved for implementation by the Minister are published as part of the recovery plan report series. Approval of a recovery plan is a departmental endorsement of the path of action necessary to restore and maintain the species in question.

As of June 2004, recovery plans have been completed for three species: peregrine falcon, western blue flag, and piping plover. Recovery planning and team formation has been initiated for 13 more species: greater sage-grouse, swift fox, burrowing owl, Ord's kangaroo rat, woodland caribou, trumpeter swan, western spiderwort, grizzly bear, soapweed/yucca moth (one team) and western silvery minnow/St. Mary sculpin/stonecat (one team). In addition, preliminary work has been undertaken for the formation of a recovery team for northern leopard frog.

For more information, go to:

http://www3.gov.ab.ca/srd/fw/escc

and

http://www3.gov.ab.ca/srd/fw/speciesatrisk/

ALBERTA PEREGRINE FALCON RECOVERY PLANNING AND IMPLEMENTATION

Recovery Team Lead: **Gordon Court**

The Alberta Peregrine Falcon Recovery Team was formed in May 2001. The draft recovery plan was finalized in the summer of 2004 and submitted to the Director of Wildlife Management and the ESCC for review. Following the completion of each year's recovery plan activities, accomplishments will be assessed and future recovery direction and initiatives will be re-evaluated as deemed necessary by the recovery team.

The plan is an action oriented document; however, it recognizes the realities of soliciting or committing Species At Risk funds toward a species regarded as "in recovery", particularly one that has been the focus of management activities for more than three decades. The recovery plan emphasizes that large-scale management actions, such as re-introductions, are no longer needed, but that baseline monitoring should be in place to ensure that the small and vulnerable population continues to grow in the province.

Pesticide residues continue to be monitored in the species through opportunistic collections of eggs each year in Alberta. Also, a memorandum of agreement has been drawn up between Alberta Sustainable Resource Development, Parks Canada and the Canadian Wildlife Service to expedite monitoring initiatives in northeastern Alberta. These agencies, and the Alberta Conservation Association, are committed to a province-wide peregrine falcon survey in 2005.

WESTERN BLUE FLAG RECOVERY PLANNING AND IMPLEMENTATION

Recovery Team Lead: **Richard Quinlan**

WESTERN BLUE FLAG
THREATENED STATUS RECOMMENDED BY THE ESCC

The Alberta Western Blue Flag Recovery Team was officially formed in October 2001. The *Maintenance and Recovery Plan for Western Blue Flag (Iris missouriensis) in Canada* was provided to the ESCC in February 2002. The ESCC recommended to the Minister on March 26, 2002 that the plan be approved and on April 18, 2002 the Minister approved the plan as submitted by the maintenance and recovery team. The plan is designed to reflect co-operation and voluntary participation, stakeholder involvement in management decisions, protection of a *Threatened* species in a sustainable ranching landscape, and landscape management to benefit multiple species of native grasslands. Annual review meetings of the recovery team were held in 2003 and 2004 to review progress made on implementation of the Action Plan in the maintenance and recovery plan, and from these meetings two annual reports were completed.

Implementation of the recovery plan from 2002-2004 included:

- continued inventory and monitoring of western blue flag populations;
- completion of eight range management plans;
- various improvements on several properties;
- initiation of a program to evaluate the success of range management plans and improvements in achieving the desired objectives of conservation of the species and native prairie in general;
- completion of a three-year summary report on the western blue flag program; and
- various activities in the public outreach and research components of the program.

During 2004-2005, Alberta Fish and Wildlife Division will continue to encourage Environment Canada to endorse the *Maintenance and Recovery Plan for western blue flag* (Iris missouriensis) *in Canada* as the national recovery plan for the species.

GORDON COURT

GREATER SAGE-GROUSE
ENDANGERED STATUS IN ALBERTA

ALBERTA PIPING PLOVER RECOVERY PLANNING AND IMPLEMENTATION

Recovery Team Lead: **Dave Prescott**

The Alberta Piping Plover Recovery Team was established in July 2001. In February 2002, the Team submitted the *Alberta Piping Plover Recovery Plan 2002-2004* to the Minister of Sustainable Resource Development and the ESCC for review. The plan was approved by the Minister in April 2002.

All tasks scheduled in each of the six strategic areas for completion in the first and second years of implementation (2002-2003 and 2003-2004 respectively) were accomplished successfully. Some of the tasks completed in the first year of implementation include: concise management plans for 25 key piping plover lakes in the province, implementation of a new exclosure design for nest protection to increase hatching success, the production and distribution of a landowner information package, and the identification of suitable habitat on several previously unsurveyed water bodies. Some tasks completed in the second year of implementation include: management plans for five additional lakes in the province, publication of a comprehensive review of techniques for managing predator populations, development of interpretive signs, surveys of breeding plovers on 33 lakes, and analyses of 10 years of nesting and management data. Work in 2003-2004 laid the foundation for several new habitat management projects to be initiated in 2004-2005. Key activities for 2004-2005 include: broadening participation in recovery efforts, expanding the funding base to include new partners, implementing activities outlined in the 30 completed lake management plans, use of the predator exclosure program on as many lakes as resources allow, and preparation of a new five-year recovery plan that will be compliant with the federal *Species at Risk Act*.

GREATER SAGE-GROUSE RECOVERY PLANNING

Recovery Team Lead: **Dale Eslinger**

The national Sage-Grouse Recovery Team was formed in November 1997 to initiate recovery planning for the prairie population of sage grouse. Alberta endorsed the resulting *Canadian Sage Grouse Recovery Strategy* in September 2001. Local stakeholders were engaged in Alberta's recovery planning process through the formation of the Alberta Sage Grouse Recovery Action Group, which first convened in January 2003 to develop a recovery action plan for the province. A Technical Advisory Group was also formed, which consists of specialists that will provide technical advice and scientific knowledge, develop models and recommend adaptive management experiments to the Recovery Action Group.

The principles of collaborate resource management and adaptive resource management were applied in the planning process for greater sage grouse in southeastern Alberta. A graduate student from the University of Calgary is conducting an evaluation of the recovery planning process. The Recovery Action Group expects to have a recovery plan finalized and submitted to the Director of the Wildlife Management Branch and the ESCC for review during 2004.

BURROWING OWL
THREATENED STATUS IN ALBERTA

SWIFT FOX RECOVERY PLANNING

Recovery Team Lead: **Joel Nicholson**

The Alberta Swift Fox Recovery Team was formed in 2004. The standard 12-month goal to complete a recovery plan for an *Endangered* species in Alberta was extended for swift fox to allow completion of the co-operative national census in the winter of 2000-2001. Pending the development and implementation of a recovery plan, policy and management necessary to ensure the legislated protection of all swift fox dens was implemented. The team is developing a recovery plan to define goals, objectives, strategies and management actions needed to guide the continued recovery of this species over the next five years. The Recovery Action Plan will follow requirements stipulated in the Federal Species at Risk Act and satisfy provincial obligations under Alberta's Species at Risk Strategy to restore this species.

ALBERTA BURROWING OWL RECOVERY PLANNING

Recovery Team Lead: **Arlen Todd**

The Alberta Burrowing Owl Recovery Team was formally established in June 2001 and has been developing a recovery plan to detail the strategies, actions, and associated timelines necessary to meet the ultimate goal of restoring the Alberta burrowing owl population to viable, naturally self-sustaining levels. The team recognizes that landholders and resource users have vital roles to play in successful recovery efforts for burrowing owls, and has developed a recovery planning process that is inclusive and effective. The Recovery Team expects to have a recovery plan finalized and submitted to the Director of the Wildlife Management Branch and the ESCC for review during 2004.

ORD'S KANGAROO RAT RECOVERY PLANNING

Recovery Team Lead: **Arlen Todd**

The Alberta Ord's Kangaroo Rat Recovery Team held their first meeting in April 2003, and expects that the draft recovery plan will be finalized in 2004, at which time it will be submitted to the Director of the Wildlife Management Branch and the ESCC for review. The Initial Conservation Action Statement recommended by the ESCC to the Minister of Sustainable Resource Development suggested that management of Ord's kangaroo rats during the next five years should focus on conservation of existing populations by preventing habitat decline and by maintaining or restoring open sand habitat within the current range of the species. The team is developing a recovery plan that will meet numerous short- and long-term objectives, and detail the strategies and actions necessary to meet the ultimate goal of maintaining a naturally, self-sustaining population such that this species is no longer required to be listed as *Endangered* or *Threatened* within the province.

WOODLAND CARIBOU
THREATENED STATUS IN ALBERTA

ALBERTA WOODLAND CARIBOU RECOVERY PLANNING

Recovery Team Lead: **Dave Hervieux**

The Alberta Woodland Caribou Recovery Team was officially formed in the fall of 2002, and is comprised of stakeholders with an interest in or affected by the management of the species and its habitat. The draft recovery plan was finalized in the summer of 2004 and submitted to the Director of Wildlife Management and the ESCC for review. The recovery plan details the actions and commitments necessary to restore woodland caribou populations in Alberta and allow the species' removal from the list of provincially *Threatened* species. Of primary importance in the draft plan is the underlying assumption that stakeholders who use and manage the land within caribou range are committed to the goal of caribou recovery. The plan emphasizes an ecosystem-based approach to developing recovery strategies and actions, and advocates an adaptive management approach during implementation of those actions. The plan recognizes that effective recovery strategies that are economically and logistically feasible, and which support the long-term sustainability of caribou herds, must be developed.

TRUMPETER SWAN RECOVERY PLANNING

Recovery Team Lead: **Mark Heckbert**

The Alberta Trumpeter Swan Recovery Team was initiated in April 2003, and expects that the draft recovery plan will be finalized in 2005, at which time it will be submitted to the Director of the Wildlife Management Branch and the ESCC for review. The team is developing a recovery plan that will detail the actions and commitments necessary to restore trumpeter swan populations in Alberta. The plan will provide background information including trumpeter swan distribution and population trends, natural history, habitat requirements, population threats and limiting factors. The greater part of the plan will describe strategies for recovery, which focus on the identified threats to the species and its habitats. The trumpeter swan's migratory nature and international life cycle requirements mean that the policies and actions of numerous governments and industries will to some extent affect the success of recovery efforts in Alberta.

WESTERN SPIDERWORT RECOVERY PLANNING

Recovery Team Lead: **Joel Nicholson**

The Alberta Western Spiderwort Recovery Team held their first meeting in October 2003, and anticipates that the draft recovery plan will be complete in 2004, at which time it will be submitted to the Director of the Wildlife Management Branch and the ESCC for review. The team is developing a recovery plan to define management actions for the protection and conservation of western spiderwort while respecting the livelihoods and values of the ranching community and other compatible land use activities. The Initial Conservation Action Statement recommended by the ESCC to the Minister of Sustainable Resource Development suggested that initial recovery efforts for this species should focus on the identification and conservation of existing population(s).

WESTERN SPIDERWORT RECOVERY EFFORTS

GRIZZLY BEAR RECOVERY PLANNING

Recovery Team Lead: **Lisa Wilkinson**

The Alberta Grizzly Bear Recovery Team was initiated in October 2002, and anticipates that the draft recovery plan will be complete in 2004, at which time it will be submitted to the Director of the Wildlife Management Branch and the ESCC for review. The greater part of the plan will address how grizzly bear recovery can be achieved. The team is working on detailing strategies and actions necessary to address several objectives, including reducing human-caused mortality, reducing human/bear conflicts, improving landscape conditions (i.e., habitat), and improving data collection on grizzly population size, health, and mortality rates. Recovery actions will be monitored and evaluated.

SOAPWEED/YUCCA MOTH RECOVERY PLANNING

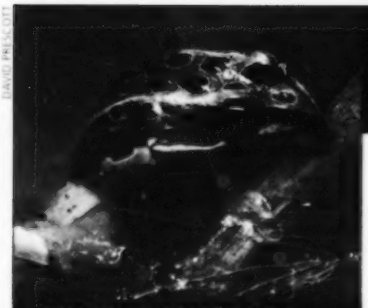
Recovery Team Lead: **Joel Nicholson**

The Alberta Soapweed/Yucca Moth Recovery Team held their first meeting in October 2003, and anticipates that the draft recovery plan will be finalized in 2004, at which time it will be submitted to the Director of the Wildlife Management Branch and the ESCC for review. The team is developing a recovery plan to define management actions for the protection and conservation of soapweed and yucca moth while respecting the livelihoods and values of the ranching community and other compatible land use activities. The Initial Conservation Action Statement recommended by the ESCC to the Minister of Sustainable Resource Development suggested that initial recovery efforts for this species should focus on the identification and conservation of existing population(s). Because soapweed and yucca moth are both considered *Endangered* in Alberta and because of each species' reliance on the other, the recovery strategy and action plan for both species are being developed concurrently.

WESTERN SILVERY MINNOW RECOVERY PLANNING

Recovery Team Lead: Terry Clayton

The Alberta Western Silvery Minnow Recovery Team held its first meeting in March 2004. The ESCC recommended that the recovery plan address the needs of western silvery minnow at both the provincial and national levels; thus, the recovery planning for western silvery minnow in Alberta is a joint provincial/federal effort. A broad-based multi-species recovery plan is being developed to incorporate other fish species at risk in the Milk River Basin including St. Mary shorthead sculpin (approved for provincial listing as *Threatened*) and stonecat (in process for being approved for provincial listing as *Threatened*). The recovery team is setting goals, objectives, strategies, and management actions needed to guide the recovery of these species over the next five years. It is expected that the draft recovery plan will be completed in 2005. Once the draft plan is completed it will be submitted to the Director of the Wildlife Management Branch and the ESCC for review.



NORTHERN LEOPARD FROG
THREATENED IN ALBERTA

Updates on Species Assessed 1999 - 2002

The *First Report of the Alberta Endangered Species Conservation Committee 2000* and *Report of Alberta's Endangered Species Conservation Committee 2002* presented information on the initial 30 species evaluated by the Endangered Species Conservation Committee (ESCC). Since those reports, many of these species have entered the recovery process, and are reported on in the recovery section of this report (see page 12). The following accounts describe progress made since 2002 on some of the remaining species: Sprague's pipit, long-toed salamander, loggerhead shrike, prairie rattlesnake, wolverine, Great Plains toad, Canadian toad, bull trout, as well as the already-listed northern leopard frog.

NORTHERN LEOPARD FROG [THREATENED]

Recovery Team Lead: **Dave Prescott**

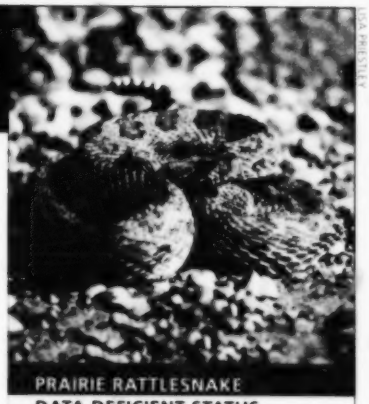
The northern leopard frog (*Rana pipiens*) was once a common and widespread amphibian throughout central and southern Alberta. During the late 1970s, the leopard frog experienced a dramatic decline in distribution and numbers over much of its historical distribution. Because the leopard frog has shown little ability to disperse naturally back into historical parts of its distribution, the Fish and Wildlife Division decided to try reintroducing leopard frogs back into areas where they had been extirpated. In 2002-2003, captive-reared leopard frogs were released into designated sites near Caroline, Rocky Mountain House, and Red Deer, Alberta. Frog observations and evidence of breeding activity suggest preliminary success in the re-introduction programs. The formation of an Alberta Northern Leopard Frog Recovery Team and development of a provincial recovery plan are underway.

SPRAGUE'S PIPIT [SPECIES OF SPECIAL CONCERN]

Management Lead: **Dave Prescott**

Sprague's pipit (*Anthus spragueii*) was identified as a "species of special concern" for Alberta in July 1999. In 2002, a draft management plan was prepared for the province of Alberta, focusing on the maintenance of long term monitoring efforts, preserving and improving breeding habitat, and increasing public awareness.

The Breeding Bird Survey and the Canadian Wildlife Service monitor distribution and population trends of Sprague's pipit in Alberta, and elsewhere within its range. Many of these studies have documented habitat use, confirming the species' strong preference for native grasslands that are lightly grazed.



PRAIRIE RATTLESNAKE
DATA DEFICIENT STATUS RECOMMENDED BY ESCC

LONG-TOED SALAMANDER [SPECIES OF SPECIAL CONCERN]

Management Lead: **Lisa Wilkinson**

In March, 2000, The Endangered Species Conservation Committee recommended the long-toed salamander (*Ambystoma macrodactylum*) be listed as a *Species of Special Concern*. Within Alberta, the long-toed salamander has a limited breeding distribution, its subpopulations are isolated and discontinuous, and the species appears to be vulnerable to habitat disturbance. Threats to salamanders include fish stocking as well as disturbance of breeding ponds and adjacent forest habitat. It appears that long-toed salamander populations may be stable in remote and protected areas. Where human pressure on the landscape is increasing, salamander populations are isolated and vulnerable to habitat destruction.

LOGGERHEAD SHRIKE [SPECIES OF SPECIAL CONCERN]

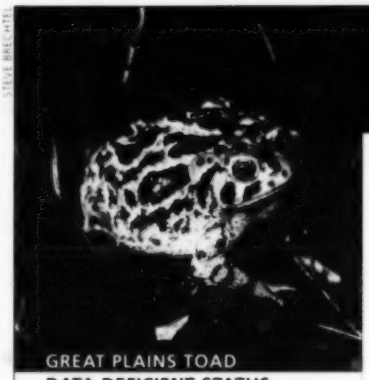
Management Lead: **Dave Prescott**

Populations of loggerhead shrike (*Lanius ludovicianus*) have declined in many areas of North America in recent years. COSEWIC has designated the species as *Endangered* in the eastern portion of its distribution, and *Threatened* in the west. In 2002-2003, new survey methods for loggerhead shrikes were evaluated and a province wide population estimate was conducted. Generally, populations were reduced in the central part of the province, but higher in areas near Lethbridge, Medicine Hat, and the Aspen Parklands. Approximately 13 560 pairs were estimated in Alberta in 2003-2004, a higher, and more precise estimate than thought previously. Although the number of shrikes is higher than expected, it is recommended that population size be verified, and that the species remains at the status of *Special Concern* because of a known susceptibility to West Nile Virus.

BULL TROUT [SPECIES OF SPECIAL CONCERN]

Management Leads: **Dave Walty/Dave Christiansen**

The bull trout has been under zero harvest regulation since 1995 in an attempt to recover many populations that had declined significantly. Populations are responding positively under this management. Fisheries biologists are currently updating the monitoring protocol for bull trout to allow a future update of the provincial management plan.



STEVE BREDIN

GREAT PLAINS TOAD
DATA DEFICIENT STATUS RECOMMENDED BY ESCC

PRAIRIE RATTLESNAKE [DATA DEFICIENT]

Management Lead: **Joel Nicholson**

In Alberta, the prairie rattlesnake (*Crotalus viridis viridis*) is identified as "data deficient". The population may be in decline, but the extent of decline is not known. A Prairie Rattlesnake Conservation Management Plan was drafted in 2002-2003 with the goal of acquiring information on population size and trends of prairie rattlesnakes in Alberta. Key objectives include (1) intensive investigation of road mortality levels and development of specific management strategies to mitigate road mortality, (2) communication with landowners/leaseholders and industry about the conservation requirements of this species, (3) more accurate estimation of population size of rattlesnakes, and (4) education to increase public support for rattlesnakes. Standardized protocols for locating snake hibernacula are being developed, and annual counts of rattlesnakes continue at hibernation sites during spring and fall when rattlesnakes aggregate at hibernacula.

WOLVERINE [DATA DEFICIENT]

Management Lead: **Matt Besko**

The wolverine has experienced considerable range reduction and population decline across North America since the arrival of Europeans. COSEWIC has listed the species as *Endangered* in the eastern portion of its distribution, and *Species of Special Concern* throughout the west. The wolverine has a naturally low reproductive rate, low juvenile survivorship, and requires a large and variable home range based on food availability and habitat structure, and therefore has a naturally low population size. Before 2002-2003, there had never been an inventory of wolverine population size, distribution, demographics or habitat use in the boreal. Although much time and energy was spent on different survey methods population densities are still inconclusive. More intense and widespread sampling is necessary to get baseline data for this species.

GREAT PLAINS TOAD AND CANADIAN TOAD [DATA DEFICIENT]

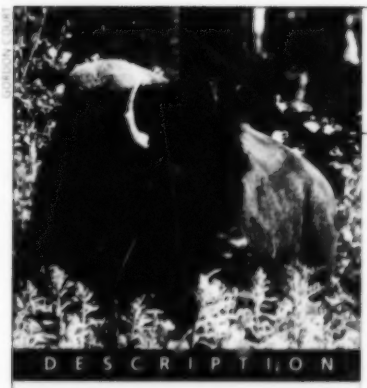
Management Lead: **Arlen Todd**

Two multi-species amphibian monitoring project are currently being undertaken in Alberta. Beginning in 1997, RANA (Researching Amphibian Numbers in Alberta) has been monitoring populations in several locations. Only one Canadian toad has been observed throughout the history of this study. A second, volunteer-based project, the Alberta Volunteer Amphibian Monitoring Program (AVAMP) has performed province-wide surveys since 1992. In 2002-2003, only 6 Canadian toads were reported. No data were reported on Great Plains toads in 2002-2003, or 2003-2004.

THIRTEEN SPECIES

EVALUATED BY THE ENDANGERED SPECIES CONSERVATION COMMITEE

JUNE 2002 - JUNE 2004



DESCRIPTION

The bison is the largest terrestrial mammal in North America, with males being much larger than females. They have massive heads, large shoulders with a high hump, and dense, shaggy dark brown and black hair around the head and neck. Both sexes have black horns. Bison are social creatures and live in small herds throughout the year.

Historically, there were two subspecies of bison found in Alberta – the bison that are found here today are considered wood bison, although there has been some intermixing with the other subspecies, the plains bison. Plains bison once occurred further south, but remain extirpated from their original range in Alberta.

E N D A N G E R E D

BISON *(Bison bison)*

Habitat

The bison has varying habitat requirements based on the season. In winter, Alberta bison eat grasses and sedges associated with wetlands, open shrublands, and dry grasslands. In other seasons, their diet can be more variable, including species such as grasses, sedges, willow leaves and lichens.

Distribution

Historically, bison were widely scattered throughout North America, from Washington DC, to the Rocky Mountains, and from central Alaska south to northern Mexico. Their distribution has been severely restricted compared to their original distribution. In Alberta, most free-ranging bison are considered "wood bison" and are found in Wood Buffalo National Park, Hay-Zama, or Wentzel Lake populations. "Plains bison" are located in one semi-wild herd in Elk Island National Park (500 individuals), and two small herds (Waterton Lakes National Park (20 individuals), and Bud Cotton Buffalo Paddock (16 individuals).

Population

Estimates of decline over the last 33-41 years range from 79-88%; this decline has slowed recently and the Hay-Zama population is increasing. There are approximately 2582 free-ranging bison in Alberta. However, these animals currently occupy only a small portion of their original range, which is estimated to have been 1 823 000 km^2 in size.

Threats

The biggest threat to bison in Alberta is the presence of two reportable cattle diseases, bovine brucellosis and bovine tuberculosis in populations or herds in the Greater Wood Buffalo National Park Area. In addition to being a concern for recovery of healthy bison herds in wild populations, these diseases are of concern to commercial cattle and bison industries.

Another threat is expansion of various agriculture, forestry, and oil and gas activities into remaining habitat for future potential free-ranging herds. This expansion could limit recovery options in different areas. It has been suggested that forestry and oil and gas activities might increase grassland and meadow habitat for bison, however, this has not been studied and determined conclusively.

Both fire suppression and hydrological development threaten recovery of this species by contributing to habitat change in northern Alberta. Suppression of fire has led to the conversion of meadow habitat, with lots of forage for bison, to forests dominated by aspen. Construction of the dam on the Peace River in British Columbia has altered the water patterns in the Peace-Athabasca Delta; without flooding, some riparian meadow areas are being lost to willow invasion.

Management

The wildlife regulations surrounding bison are complex. On provincial land, only free-ranging bison found in the Bison Management Area in northwestern Alberta are considered "wildlife". All other populations or herds are not considered "wildlife" and thus are not protected under Alberta's *Wildlife Act* and *Regulation*. Some of these populations include the Wentzel Lake population, captive, non-commercial herds at Elk Island National Park, on Syncrude Canada Ltd. land, and commercial bison herds in the province. Bison in national parks are protected by national park regulations and under Schedule 1 of the federal *Species At Risk Act*.

The bison has been designated as *Endangered* under Alberta's *Wildlife Act* and this makes it illegal to hunt, harm or traffic in these animals in Alberta within a designated area in the northwestern part of the province.

STATUS

Alberta: Endangered status recommended; status maintained for the population in northwestern Alberta
British Columbia: Sensitive
Saskatchewan, Yukon Territory: May be at Risk
Manitoba, Northwest Territories: At Risk
Canada (wood bison): Threatened; on Schedule 1 of *Species at Risk Act* (plains bison is under consideration for listing on Schedule 1 as Threatened)
U.S.: Endangered
Global: G4TU, G4T2Q

NORTHERN LEOPARD FROG *(Rana pipiens)*

DESCRIPTION

The northern leopard frog is a medium-sized frog that varies in color from intense green to pale brown. It has a mosaic of haloed, dark spots on its back, legs, and sides. A key feature used to distinguish this frog is the pair of white to cream-colored ridges that extend from behind the eye to the base of the hind legs. The call sounds like a creaky door or a person running their fingers over an inflated balloon.

Northern leopard frogs spend the winter hibernating at the bottom of well-oxygenated water bodies that do not freeze to the bottom. In Alberta, they emerge shortly after the ice melts. Most breeding occurs between late April and late June. Eggs hatch in about five days. About 60 to 90 days after hatching, tadpoles metamorphose into frogs, and their diet changes from floating vegetation and detritus to insects, spiders, and other invertebrates as well as small birds, snakes, frogs and fish.

Habitat

The northern leopard frog requires a number of different habitat types. Generally, it is associated with clean and clear water bodies in open or lightly wooded areas with short vegetation. Adults are often found along the edges of ponds, streams, springs, or lakes, and breed in warm, shallow, permanent, and semi-permanent features such as wetlands and lakes. After breeding and transformation, all age classes move to summer feeding areas, which are open areas with short grass that are along the edges of water bodies.

Distribution

Historically in Alberta, it is thought the northern leopard frog was widely distributed and locally abundant in the Grassland, Parkland, and Foothills Natural Regions, and a smaller range was also noted in extreme northeastern Alberta. Today, the frog is only found in scattered, isolated populations along the Oldman, lower Red Deer, Milk, South Saskatchewan and lower Bow rivers, in the Cypress Hills, and in the northeast corner of the province.

Population

Throughout the range in Alberta, abrupt and dramatic declines or extirpations occurred in the late 1970s and early 1980s and these were concurrent with declines noted in other parts of the species' North American range. The specific cause(s) of the declines in Alberta and elsewhere is unknown; however, there are a number of factors that could be involved.

Threats

To date, no research has been able to determine which threats are most important across the range of the northern leopard frog in Alberta.

Climate change, particularly drought and accompanying loss of wetlands, may be important in some populations in Alberta. Disease may be involved, although ultimately, it is difficult to determine whether disease is a natural feature of the biology of the species or is induced by environmental stressors.

Habitat fragmentation might be a concern because the northern leopard frog requires a suite of habitat types to complete its life cycle – roads may isolate individuals from seasonal habitats or make it difficult for individuals to disperse. This results in decreased gene flow and reduces the chance that immigrating individuals will "rescue" isolated and declining populations.

Habitat loss is believed to be the cause of declines noted in the northwestern United States, although the extent to which it has caused declines in Alberta is unknown. Livestock activity in riparian areas could be a potential threat, either through trampling or habitat degradation.

Management

Currently, the northern leopard frog is listed as *Threatened* under Alberta's *Wildlife Act*. By 2005, Alberta Sustainable Resource Development will prepare a provincial recovery plan to set goals, objectives, strategies, and management actions needed to guide recovery for this species over the next five years.

Since 1999, reintroduction of the northern leopard frog has been attempted at three sites in central Alberta. Initial evidence suggests release efforts have been successful in at least one site.

STATUS

Alberta: Threatened; status maintained in 2003
British Columbia: At Risk
Saskatchewan, Northwest Territories: Sensitive
Labrador: S2S3, Sensitive
Manitoba, Ontario, Québec, Nova Scotia, New Brunswick: Secure
Prince Edward Island: S4S5, Secure
Nunavut: Not Assessed
Canada (COSEWIC): Endangered (southern mountain population), Special Concern (western boreal/prairie population), Not at Risk (eastern population)
U.S.: N5
Global: G5

DESCRIPTION

The white-winger scoter is a large-bodied sea duck. Males are black with a tick of white near their eye; females and young are olive brown with a small, white cheek and ear patches that may be visible. Both sexes have white wing patches that are most likely to be visible when they fly. Generally, they are silent except during breeding when they may croak or whistle.

Female scoters are nest-site philopatric, meaning they return to the same nest site in subsequent years; males are not. The white-winged scoter is a late-nesting duck, arriving on breeding lakes in mid-May. This species lays 8-10 eggs in early June. Scoters are a long-lived duck species. Females banded as adults survived 10 years after banding, one lasting 18 years. Adults eat primarily aquatic invertebrates throughout the year.

WHITE-WINGED SCOTER *(Melanitta fusca deglandi)*

Habitat

In Alberta, the white-winged scoter breeds on large, permanent wetlands and lakes and nests in dense or low ground cover near these areas or on shrub-covered islands. They spend their winters along the Atlantic and Pacific coasts. Continentally, the majority of scoters are thought to breed in the boreal forest and taiga plain of North America.

Distribution

Historically, the white-winged scoter was found across Alberta, but it has virtually disappeared from the southern half of the province. This species once bred on large, permanent wetlands and lakes throughout the prairies. In other areas, the breeding distribution is found in the western boreal forest from Alaska through western Canada, east to Hudson's Bay, and south into the prairie and parkland. However, the southern extent of the distribution has retracted since the 1900s and no longer includes North Dakota or southern Saskatchewan or Manitoba.

Population

Historically, Alberta made up approximately one-sixth of the North American breeding range of the white-winged scoter. In the southern half of Alberta, population surveys from 1956-2001 suggest a decline of about 40-50%. In the north, the decline is thought to be of similar, but of lower magnitude. In the last 10 years, it appears the northern population may have stabilized. However, overall, the entire Alberta population has not recovered from the long-term decline. Similarly, across North America, breeding populations throughout most of the range are declining or disappearing, particularly in the southern portion of the range.

Threats

Threats to the white-winger scoter are not well understood, nor has any particular limiting factor or combination of factors been conclusively identified. It is thought that scoter populations may be limited by factors on their wintering grounds since abundant breeding habitat is available throughout the breeding range. Bioaccumlation of toxins may be affecting reproductive success, though this has not been tested. Local hunting pressure has likely affected certain populations.

Management

Alberta's Endangered Species Conservation Committee has recommended development of an appropriate management strategy, which should include inventory and investigation of factors involved in population declines in Alberta. There are no harvest limits for scoters in Alberta, but harvest appears to occur at low rates relative to other duck species.

The Federal Migratory Bird Regulations considers the white-winged scoter a legal game bird, and the species is considered a game species throughout its range. It has recently been recognized as a priority species under the Sea Duck Joint Venture (SDJV) of the North American Waterfowl Management Plan.

STATUS

Alberta: Species of Special Concern; recommended in 2002
British Columbia, Manitoba, Labrador, Newfoundland, Nova Scotia, New Brunswick, Prince Edward Island: Secure
Northwest Territories, Yukon Territory, Saskatchewan: Sensitive
Ontario: May be at Risk
Canada (COSEWIC): Not Assessed
U.S.: N5B, N5N
Global: G5

PRAIRIE FALCON *(Falco mexicanus)*

Habitat and Distribution

The prairie falcon inhabits dry, open areas of southern Alberta with clay, sandstone or rock cliffs and outcrops, particularly along rivers, streams or near a large water body. Open prairie with perch sites, as well as low vegetation that contains prey such as ground squirrels and med-sized birds, makes ideal prairie falcon habitat.

The breeding distribution of the prairie falcon is generally from Red Deer south to central and northern Mexico. The species occurs as far east as the eastern border of Colorado, and as far west as the Pacific in its southern distribution. Within Alberta, the prairie falcon is located mainly along main waterways and their tributaries.

Population

It is estimated that the Canadian population of prairie falcons is between 250 and 500 pairs. The Alberta population consists of approximately 81% of the Canadian population, and 6% of the continental population. The prairie falcon is considered rare in British Columbia (8 pairs), and Saskatchewan (25-50 pairs).

It is difficult to determine short-term population trends for this species because there is limited recent information available. In Alberta, the population appears stable with some local declines. Long-term population trends depend strongly on the maintenance of prairie grasslands, cliff nest sites, and particularly the conservation of prey species in Alberta.

Threats

There are four major threats to prairie falcon populations. 1) Loss of native grasslands to cultivation causes a decrease in ground squirrel population. Considering that 94% of prairie falcon diet is obtained from ground squirrel colonies, loss of native prairie is a primary concern. 2) Loss of nest sites as a result of cliff erosion is also of concern to the prairie falcon as they are one of the least versatile nesters among Alberta raptors. Irrigation and flooding have also caused the destruction of many prairie falcon nest sites. 3) Much like other predator species such as peregrine falcons, prairie falcons are susceptible to the accumulation of toxic chemicals that causes poisoning and mortality in adults and eggs. Although this threat has decreased with restrictions on the use of mercury compounds and organochlorides in agriculture, there is continued use of many potential harmful chemicals. 4) Several studies show that human disturbance at nest sites is a major threat to prairie falcon populations.

Management

At present, the prairie falcon is designated as a *Bird of Prey* under Alberta's *Wildlife Act*/Wildlife *Regulation*, which makes it illegal to kill, possess, buy, or sell individuals of this species in Alberta. Prairie falcons have been managed in several ways in Alberta including a re-introduction program at Fish Creek Provincial Park, chick fostering, rehabilitation of injured birds, artificial nest site construction, egg sampling for pesticides, and detailed habitat assessment.

Prairie falcons are extremely dependent on ground squirrel populations for prey availability. Studies of falcon populations show that nesting prairie falcons traveled an average of 6 km to ground squirrel prey and 4 km to bird prey. It is likely impossible to manage prairie falcons without managing their prey and habitat.

GORDON COURT

DESCRIPTION

The prairie falcon is a medium to large-sized falcon, very similar to the peregrine falcon, though lighter in colour. The prairie falcon has a distinctive dark "wingpit". When agitated, the prairie falcon utters a harsh "kek, kek, kek".

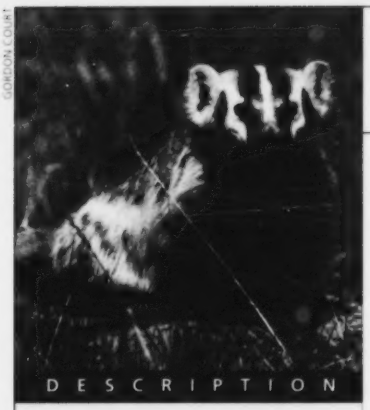
Adult prairie falcons typically overwinter in southern Alberta, whereas juveniles migrate south to the United States and northern Mexico. Territories are generally established in March, although in mild winters, territories may be occupied throughout the winter.

Falcons generally lay one clutch of 4-5 eggs annually, and young are usually fledged by the end of June. Juvenile mortality (65%-85%) is much higher than adult (19-35%). Maximum lifespan of the prairie falcon may be as long as 20 years, though the estimated life expectancy for breeding adults ranges from 2.4-4.9 years.

STATUS

Alberta: Special Concern; recommended in 2003
British Columbia: At Risk
Saskatchewan: Sensitive
Manitoba: Secure

Ontario: Accidental
Canada (COSEWIC): Not at Risk
U.S.: N5B, N5N
Global: G5



GORDON COURT

DESCRIPTION

D A T A D E F I C I E N T

AMERICAN BADGER *(Taxidea taxus)*

The American badger is a large nocturnal mustelid that is thick-set, broad, squat, and muscular, with short, powerful legs. The badger has short ears and tail, a pointed nose, and a broad triangular head. The thick pelage is yellowish grey with a white stripe from the nose to the shoulders. The fur is longer on the sides giving the animal a flattened appearance and flowing nature as the animal moves. The front feet are adapted for digging and have claws as long as 5 cm in length.

Badgers live in dens up to 10 m in length, with a diameter of about 30 cm. Although they may prey on several *At Risk* and *May be at Risk* species, the burrows that badgers create are used by many different species including the burrowing owl (*Threatened*), swift fox (*Endangered*), and several snake species. Mating occurs in late July and August. Litters of 1 to 5 young are born between late April and June.

Habitat

Badgers are most often located in open, treeless habitats with an available food source of fossorial (burrowing) mammals. Rarely are badgers found in forested areas, although sometimes they will overwinter in sheltered areas. Habitat quality and quantity in Alberta have decreased dramatically since pre-settlement conditions. Although clearing of aspen parkland has allowed some range extension, cultivation, urbanization and industrial activities have restricted badgers by eliminating habitat and prey.

Distribution

In Alberta, the historical distribution of the American badger from the North Saskatchewan River to the United States border. Recently, the badger's distribution has expanded over 50 km north of the North Saskatchewan River.

Population

Historically, the badger population in Alberta has fluctuated as a result of trapper harvest. Although abundant in 1927, unregulated harvest resulted in such low numbers that the trapping season was closed between 1935 and 1941. Currently, the badger population is estimated to be between 1000 and 10 000 individuals and is suspected to be decreasing. At the estimated maximum, this population size is approximately half of the historic pelt harvest of 1928 (18 000 pelts). The Prairie population is estimated at 17 700 to 43 900 individuals. Population trends are uncertain throughout the distribution of the American badger.

Threats

Changing land use and reduction in prey seem to be the primary factors affecting badgers. Although forest clearing has encouraged badgers to expand their distribution, cultivation has removed much badger habitat. Badgers are trapped, shot, and poisoned because their diggings are thought to cause broken legs in livestock, lead to water loss from irrigation canals, cause damage to vehicles encountering their burrows, and cause damage in cemeteries. Rodent control programs, intensive petroleum development and urban expansion have caused increased mortality, and may limit habitat and prey availability.

Management

The American badger is ranked as *Sensitive* according to the *General Status of Alberta Wild Species 2000*. The badger is classified as a furbearer but is not a major target of wild fur management in Alberta. Seasons exist for all areas except Fur Management Zones 1 and 2 found approximately north of Slave Lake. To date, there have been no management or research activities focusing on the American badger in Alberta. Badgers may be hunted without a license and during all seasons on privately owned land to which the resident has the right of access.

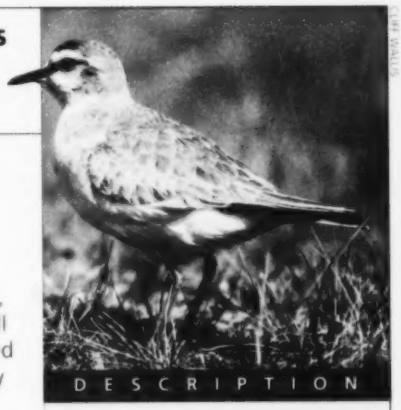
Federally, the badger was designated as *Not at Risk* in 1979. A re-evaluation of the species in 2002 revealed a splitting of the species into three subspecies. *T. t. jeffersonii* (British Columbia) and *T. t. jacksoni* (Ontario) were both designated as *Endangered*, whereas *T. t. taxus* (Alberta, Saskatchewan, Manitoba) was designated as *Not at Risk*.

STATUS

Alberta: Data Deficient; recommended in 2002
British Columbia: At Risk
Saskatchewan: Sensitive
Manitoba: Secure
Ontario: May be at Risk

Canada (COSEWIC): Not at Risk (*T. t. taxus*), Endangered (*T. t. jacksoni, T. t. jeffersoni*)
U.S.: N5
Global: G5

MOUNTAIN PLOVER (*Charadrius montanus*)



CLIFF WALLIS

Habitat

Contrary to its name, the plover does not live in the mountains. Rather, it has specific requirements for open, flat uplands that include areas of short vegetation and bare patches in the Dry Mixedgrass Subregion of the Grassland Natural Region. Disturbed, dry areas, often heavily grazed or recently burned, are preferred.

Distribution

The breeding range of the plover in Alberta consists of two locations in southeastern Alberta. Breeding has also occurred in southwestern Saskatchewan. In the United States, the range extends from Montana, Wyoming, and Colorado, through northwestern Texas. It has been extirpated from North and South Dakota.

Population

The Alberta population has been estimated at between 0 and12 birds, and there have probably never been more than 50 birds in Canada. The Alberta population accounts for only 1% of the North American population, which is estimated at 8000-10 000 birds.

The species is difficult to detect in field surveys and no population trend is discernible in Alberta. There have been no confirmed breeding observations in Alberta since 1990; however, survey effort and frequency have varied. Despite these uncertainties, it is known that in the United States the population has experienced dramatic range-wide declines of 50-89%, although this rate of decline seems to have decreased somewhat in the last decade.

Threats

Threats include conversion of native grassland to croplands, particularly from associated seeding activities. The plover is attracted to these areas because they mimic their natural habitat; however, these areas have little food for the plover. Absence of small areas of native grasslands that are heavily grazed, along with reduced fire frequency, might also threaten this species.

The mountain plover, and other plants and animals of the shortgrass prairie, evolved largely within an erratic pattern of grazing activities of bison, pronghorn, and numerous burrowing animals as well as frequent fires. Grazing and fire created a suite of lightly, moderately, and heavily disturbed areas of different shapes and sizes across the prairies. Today, many range management practices favour homogeneous grazing of grasslands by domestic stock and fire suppression in many areas. Consequently, habitat is not as variable as is required for the persistence of this species.

Certain weather patterns are also important to this species. In years of high average precipitation, tall grass cover may discourage the bird from nesting. Conversely, in years of drought, birds may not nest if food is scarce. If drought severity worsens on the prairies, or if weather conditions become more extreme, the mountain plover might become an even less common breeding bird in Alberta.

Management

At present, the mountain plover is designated as a *Non-game Animal* under Alberta's *Wildlife Act*/Wildlife Regulation, which makes it illegal to kill, possess, buy, or sell the plover in Alberta. Alberta's Endangered Species Conservation Committee has recommended to the Minister of Sustainable Resource Development that the mountain plover be listed as *Endangered* in Alberta. The mountain plover is listed as *Endangered* in Canada and is on Schedule 1 of the federal *Species at Risk Act*.

A provincial recovery team, with representation from many affected stakeholders, will be formed to address some of these questions and others in a recovery plan. The plan will also outline goals, objectives, and strategies that will guide recovery or management of the species over the next five years.

DESCRIPTION

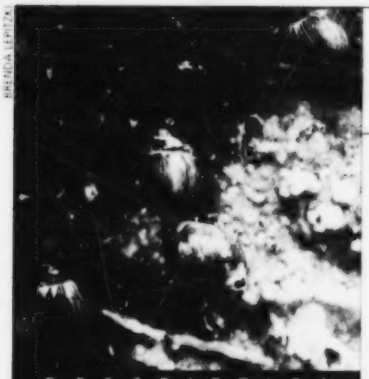
The mountain plover is a medium-sized shorebird that is only slightly smaller than a killdeer. Generally, the bird is silent; the most often heard vocalization in Alberta is a low, guttural alarm call given by adults near young. The species is short-lived, with an average lifespan of only two years.

The plover arrives in Alberta in April. Breeding probably commences in early to mid-May. Most plovers spend the winter in central California, although the wintering range also extends from northern Mexico through southern Texas.

STATUS

Alberta: In process (Endangered status recommended in 2004)
Saskatchewan: Accidental
Canada: Endangered; on Schedule 1 of *Species at Risk Act*

U.S.: N2B, N2N
Global: Vulnerable (IUCN)



DESCRIPTION

I N P R O C E S S

BANFF SPRINGS SNAIL *(Physella johnsoni)*

The Banff Springs snail is a small, inconspicuous, globe-like snail that is only found in one area in the world – the thermal springs (also known as hotsprings) on Sulphur Mountain in Banff National Park in Alberta.

The snail has lungs and breathes air; however, it also has a rudimentary gill that is somewhat reduced compared with other similar species. The reduced gill and lack of dissolved oxygen in thermal springs may explain why the snail is predominantly found near the water surfaces of thermal springs.

The Banff Springs snail is an integral part of the biodiversity of thermal springs – these ecosystems include a variety of other plants, animals, and bacteria that call these springs, or areas nearby, their home.

Habitat and Distribution

The Banff Springs snail is only found in five thermal springs near the town of Banff, although it previously occupied four additional springs in the same area. Four of five springs where it is currently found are in areas of high human use.

This snail clings to rocks, sticks, needles, cones and leaves, at or near the surface of the water, or clings to floating mats of microbes.

Population

Population counts fluctuate seasonally; however, a reasonable minimum estimate of the population size is 2000 mature snails. Numbers appear to be relatively stable or have increased over the last five years (1999-2004).

Threats

The greatest threat to this species is human use of the thermal springs. To some extent, all of the springs where this snail is found have been disturbed by humans – water flow has been diverted for public use, illegal swimming and "limb-dipping" (dipping of arms or legs into the water) occur (which introduce harmful substances such as detergents and sunscreen to the water), and garbage and coins litter some springs. Another threat is changes in the flow of spring water, possibly resulting from climate change. For example, water flow has stopped periodically at both the Upper Hot and Upper Middle Springs. A final threat comes from waterfowl and other birds that eat the snail as prey.

Management

In 1997, Alberta's *Wildlife Act* was amended to allow designation, protection and recovery of *Threatened* and *Endangered* invertebrates. A national recovery plan is currently being developed for this species, which is protected under the federal *Species at Risk Act* and the *Canada National Parks Act*. The federal legislation makes it illegal to harm these animals anywhere or at any time on any federal land in Canada, including Banff National Park.

This species is found only in Banff National Park, and for this reason, primary responsibility for its conservation and recovery rests with the federal government, and for this reason, Alberta Sustainable Resource Development has not been involved in conservation of the Banff Springs snail. However, if any individuals are found outside the National Park system, the province will become more instrumental in recovery planning and processes.

STATUS

Alberta: In process (Endangered status recommended in 2004)
Canada: Endangered; on Schedule 1 of *Species at Risk Act*
Global: G1, "Critically Imperiled"

LAKE STURGEON (*Acipenser fulvescens*)

Habitat

In Alberta, the lake sturgeon is found in large, freshwater rivers with diverse habitat, many different types of prey, and a natural variation in water flow. Preferred habitat varies according to life stage – spawning sturgeon require fast-flowing, rocky areas, juveniles prefer habitat with flat sandy bottoms, and adults prefer deep, mid-river areas and pools with silt and rock substrate. In other areas, the lake sturgeon is found in lakes that offer some of the same habitat characteristics.

Distribution

In Alberta, one subpopulation of lake sturgeon is found in the lower reaches of the Oldman, Bow, and Red Deer rivers, and the South Saskatchewan River to the Saskatchewan border. The second subpopulation is found in the North Saskatchewan River to the Brazeau and lower Clearwater rivers. The Alberta population is considered to represent the westernmost extent of the species' range in North America.

Throughout the rest of North America, the lake sturgeon has a wide distribution that includes the Great Lakes, the Hudson-James Bay, and Mississippi River drainages.

Population

In Alberta, numbers of lake sturgeon are undoubtedly lower than they were in the 1800s; the historical decline has been attributed to high rates of harvest. It wasn't until the 1980s that the population recovered to low but significant numbers. As of 2002, population densities were very low and the population as a whole is considered to be declining. Furthermore, sturgeon subpopulations in both the North and South Saskatchewan Rivers are considered at or below critical densities needed for long-term persistence of the population.

Throughout the rest of the North American range, sturgeon populations have declined in size and have been lost from former parts of their historic range (e.g., Lake Winnipeg drainage).

Threats

There are a number of potential threats to lake sturgeons in Alberta. Construction of dams has caused a loss of spawning habitat and barriers to migration. Various dams have isolated the Alberta population from the nearest significant population of sturgeon in eastern Saskatchewan and western Manitoba. Dam operations also affect availability of food and nutrients, and other components of community structure and ecology. Increasing use of river water for hydroelectric development, irrigation, and discharge of industrial and municipal effluents like sewage is considered a threat to habitat, but also to the health of individual fish. Overharvesting may also be a concern. In both the North and South Saskatchewan Rivers, harvest rates (legal, illegal, or accidental) exceed potential sustainable harvest yields of 5-10%. Generally, the lake sturgeon is more susceptible to overharvesting than other fish species because of its longevity, its delayed maturation, and infrequent spawning.

Management

The lake sturgeon is managed and protected as a game fish in Alberta. In 1997, Alberta's *Wildlife Act* was amended to allow designation, protection and recovery of *Threatened* and *Endangered* fish. Within two years of listing this species, a provincial recovery team, including Alberta Sustainable Resource Development and other stakeholders, will prepare a provincial recovery plan to set goals, objectives, strategies, and management actions needed to guide recovery for this species over the next five years. Initial conservation efforts will focus on a review of conservation and management strategies for lake sturgeon in Alberta, with particular attention to management of angling activity. More study and inventory on this species in the South Saskatchewan River may also be helpful.

OWEN WATKINS

DESCRIPTION

The lake sturgeon is a very prehistoric-looking fish, with a body armor of bony plates. It has been called a living fossil because 100 million year-old fossils have been found that look much like lake sturgeon do today.

The lake sturgeon can grow to be incredibly large – fish that weigh 45 kg have been reported. They can also live a very long time – males can live to 55 years and females, 80 years or more. The maximum lifespan reported in Alberta is 78 years, while in Canada it is 154 years!

STATUS

Alberta: In process (Threatened status recommended in 2003)
Saskatchewan: not listed
Manitoba: not listed
Ontario: Sensitive
Québec: May be at Risk
Canada (COSEWIC): Endangered (western populations), Special Concern (elsewhere in Canada)
U.S.: N3N4
Global: G3

DESCRIPTION

I N P R O C E S S

WESTERN SILVERY MINNOW *(Hybognathus argyritis)*

The western silvery minnow averages 75 to 125 mm in length. It has an elongated body with a stout narrow section just before the tail. The short, bluntly triangular head has a rounded snout that overhangs the mouth, which opens toward the bottom. The caudal fin is forked. Spawning males are light yellow along the sides and lower fins. The fish is otherwise silvery with a broad, slaty mid-dorsal stripe.

Little is known about the western silvery minnow; most information comes from other minnow species. Females begin spawning in May at around one year of age, males probably do not spawn until their second year. Non-adhesive eggs are 1 mm in diameter, and hatch in six to seven days. The number of eggs ranges from 2000 to 6600 eggs, and increases with female size. The diet of this fish consists of diatoms, algae and bottom debris.

Habitat

The western silvery minnow is usually found in the backwaters and pools of larger, northern streams of the plains, where the gravelly, sand, muck or debris-covered bottom is not covered by silt. Spawning occurs in shallow (30 cm deep), heavily vegetated backwaters in slower moving reaches of streams. The ideal habitat is quiet water rich in phytoplankton.

Distribution and population

This species occurs in the backwaters of large streams in the plains of the Mississippi River Basin, from the mouth of the Ohio River north to the Missouri Basin and Milk River in Montana. In Canada, it is found only in the Milk River in southern Alberta, where it usually makes up less than one percent of the fish captured during surveys. The species was more abundant in the Milk River before 1900. The decline occurred when waters began to be channeled into the river for irrigation. This led to increased turbidity, which likely caused the population to decline. During a severe drought in 2001, the Milk River was reduced to a series of isolated pools; however the western silvery minnow survived this period, likely by taking refuge in those pools.

Older studies suggest that the western silvery minnow has been extirpated from Ohio, as well as extensively throughout the United States. No specific locations have been provided, likely because no specific records were taken in the early 1900s when the species distribution is thought to have been affected.

Threats

Siltation and turbidity are blamed for the minnow's decline in Missouri and Ohio. The same factors likely exist in Canada. The Milk River flows through short-grass prairie habitat, which is subject to continuous erosion producing a high rate of siltation; channeling and overgrazing also contribute to erosion.

Management

In 1997, Alberta's *Wildlife Act* was amended to allow designation, protection and recovery of *Threatened* and *Endangered* fish. Within two years of listing this species, a provincial recovery team, including Alberta Sustainable Resource Development and other stakeholders, will prepare a provincial recovery plan to set goals, objectives, strategies, and management actions needed to guide recovery for this species over the next five years. Initial conservation efforts will focus on collecting information on population size, distribution, trends, and habitat availability.

The western silvery minnow is considered Threatened under the federal *Species at Risk Act* (SARA). This designation makes it illegal to kill, possess, buy, harm, harass, collect or sell individuals of this species in Canada.

STATUS

Alberta: In process (Threatened status recommended in 2003)
Saskatchewan: Accidental
Canada: Threatened; on Schedule 1 of *Species at Risk Act*

U.S.: N4
Global: G4

I N P R O C E S S

SHORTJAW CISCO (*Coregonus zenithicus*)

DESCRIPTION

The shortjaw cisco is one of two species of cisco known to occur in Alberta – the other is the common cisco or lake herring that is widespread in Alberta. Both shortjaw cisco and lake herring are trout-like fishes that are shiny and silver in color. For this and other reasons, they can be very difficult to tell apart. The most widely accepted way to tell these species apart is by counting gillrakers - the shortjaw cisco generally has fewer gillrakers. However, even with this distinction, it can be very difficult to tell these two species apart with any certainty – even for species experts.

Habitat

The shortjaw cisco is generally found in deep, cold, and very large lakes. However, the species appears to be adaptable and can be found in shallower lakes (e.g., Barrow Lake in Alberta).

Distribution

Most shortjaw cisco in North America are found in the Great Lakes Basin. Outside this basin, the distribution stretches across the Great Lakes to Great Slave Lake in the Northwest Territories. However, the populations outside the Great Lakes Basin are thought to be small and widely scattered. Furthermore, the exact distribution in the north is unknown because much of this area is remote and relatively few lakes have been sampled.

In Alberta, the known distribution of shortjaw cisco is small and limited to Barrow Lake in the Canadian Shield Region of northeastern Alberta. Possibly, the species may be found in Lake Athabasca, Cold Lake, or Gregoire Lake; however, more research and sampling are needed before this can be determined conclusively.

Population

The small, isolated population of shortjaw cisco in Barrow Lake, Alberta is thought to be stable. However, there have been serious declines noted in other parts of the shortjaw cisco range in Canada. Populations in Lakes Michigan, Huron, and Erie are apparently extirpated, while populations in Lake Superior and Lake Nipigon are declining.

Threats

In Alberta, the population appears stable and is not under any immediate threat of extinction. However, the distribution of shortjaw cisco is limited to one lake in the province, making the Alberta population especially vulnerable to any threats. Current threats to the Alberta population include potential competition and interbreeding with the closely related and abundant lake herring. These threats are generally different from those faced by the shortjaw cisco in its Great Lakes range where overfishing, predation by sea lamprey, and the effects of other introduced species are the main causes of extirpation or decline.

Management

The shortjaw cisco is managed and protected as a game fish in Alberta. In 1997, Alberta's *Wildlife Act* was amended to allow designation, protection and recovery of *Threatened* and *Endangered* fish. Within two years of listing this species, a provincial recovery team, including Alberta Sustainable Resource Development and other stakeholders, will prepare a provincial recovery plan to set goals, objectives, strategies, and management actions needed to guide recovery for this species over the next five years. Initial conservation efforts will focus on identifying and conserving the existing population.

Other ongoing research by the Provincial Museum of Alberta and Fisheries and Oceans Canada is focused on identifying whether other populations of shortjaw cisco exist in lakes other than Barrow Lake in Alberta.

STATUS

Alberta: In process (Threatened status recommended in 2003)
Saskatchewan: Undetermined
Northwest Territories: May Be At Risk
Manitoba: Sensitive
Ontario: Threatened
Canada: Threatened; on Schedule 2 of *Species at Risk Act*
U.S.: N3
Global: G3

DESCRIPTION

I N P R O C E S S

SMALL-FLOWERED SAND-VERBENA
(*Tripterocalyx micranthus*)

The small-flowered sand-verbena is an annual plant that grows to heights of 20 to 50 cm. It is a member of the 'four o'clock' family of plants – a fitting name since flowers tend to open in the late afternoon. The tiny, greenish-white flowers appear from May to July. The fruit are pale pinkish-green, about 2 cm long, and have two to three thin, papery wings. The plant is considered to be 'ephemeral' in that it grows quickly, flowers early, produces seed, and then dies, all in a short period of time. Seeds are dispersed by the wind.

Habitat

The sand-verbena is found in dry, sand dune habitats in the Dry Mixedgrass Subregion of the Grassland Natural Region in Alberta. To persist in sand dunes or sandhills, the plant seems to require at least some drifting sand. Sand-verbena seems to prefer hard-packed, finer sand on level ground though it has been found on slopes and along dune ridge tops.

The sand-verbena is adapted to surviving in this dry and harsh environment. By setting seed early in the season, the plants survive the heat and/or drought of midsummer as dormant seeds. The plant is also low and shrub-like in form, which allows it to trap fine silts and clays that have high water-holding capacities.

Distribution

The small-flowered sand-verbena is known from eight general locations in southeastern Alberta, most of which are associated with the South Saskatchewan River. One location is associated with the Lost River near the Montana border. In Saskatchewan, the plant is only known from one location, just east of the Alberta border, near the town of Empress. This species is much more widely distributed in the United States.

Population

Despite diligent efforts by a number of different investigators looking for this plant, no other locations have been found. A maximum estimate of numbers of plants in Alberta is 3600 plants. However, at individual locations, there can be tremendous variation in plant numbers from year to year – for example, in 2001, a drought year, only one plant was found at the Lower Bow site, but in 2002, the same location had 789 plants!

Threats

The largest immediate threat to this plant is dune stabilization that is allowing various other prairie species to overtake the open and sandy habitat required by sand-verbena. The dunes are stabilizing because both fire and grazing bison are now absent - historically, both were prominent ecological processes on the Canadian prairies. Some 'weedy' species not native to the prairies also further stabilize dunes.

Changes in land use of sand dune and sandhill habitats are also a concern. Dune habitats have been completely cultivated or encircled by cultivation that prevents the dune from spreading. Sand is also being removed from habitats to support other development projects. ATV use of the dune slopes can also damage the plant.

Management

In 1997, Alberta's *Wildlife Act* was amended to allow designation, protection and recovery of *Threatened* and *Endangered* plants. Within two years of listing this species, a provincial recovery team, including Alberta Sustainable Resource Development and other stakeholders, will prepare a provincial recovery plan to set goals, objectives, strategies, and management actions needed to guide recovery for this species over the next five years. Recovery planning will consider inventory and management approaches that conserve a variety of species in the rare sandhills landscape. In the interim, biologists are contacting landowners or lessees to identify their concerns and attempt to reach cooperative agreements regarding conservation of sand-verbena and dune habitat on private property.

The small-flowered sand-verbena is listed under Schedule 1 of the federal *Species At Risk Act*, and as such, it is illegal to kill, harm, possess or collect individuals of the species on federal land.

STATUS

Alberta: In process (Threatened status recommended in 2003)
Saskatchewan: Endangered
Canada (COSEWIC): Threatened
U.S.: NNR
Global: G5

ST. MARY SCULPIN (provisionally *Cottus bairdi punctulatus*)

Habitat

Sculpins are nocturnal and usually spend daylight hours hiding beneath rocky cover. St. Mary sculpins are usually found in moderately cool streams with riffle habitat, rocky or gravel substrate, and weak to strong currents, and are usually absent from pools where bottoms are entirely sand or clay. They will spawn under rocks in gaps 0.12 to 0.38 m in diameter. Eggs are usually attached to these rocks though sometimes they are attached to aquatic vegetation, wood, or other debris.

Distribution

Within North America, there are two geographically isolated groups of mottled sculpin separated by the Great Plains. In Canada, the western distribution of the mottled sculpin reaches from the Rocky Mountains to the Pacific coast in a discontinuous pattern. The eastern distribution is found from Labrador to the Hudson Bay drainages of Ontario and Manitoba. Two distinct forms have been identified in western Canada: the Columbia mottled sculpin, and the Rocky Mountain form found in southeastern British Columbia and southwestern Alberta. The Rocky Mountain form is thought to be the closest relative to the St. Mary form. The St. Mary sculpin inhabits only the St. Mary and Milk rivers in Alberta.

Population

The St. Mary sculpin is considered locally abundant where it is found in Alberta. In 2000 and 2001 this species was considered the highest or second highest in relative abundance in the Milk and St. Mary rivers. Population sizes were highest in the North Milk River, and decreased downstream to where they were absent in the lowest section of the Milk River mainstem.

Population trends are difficult to evaluate given variation in season and location of sampling.

Threats

Although locally abundant, the St. Mary sculpin has an extremely limited distribution. Comparison of sculpin habitat with other areas in the Oldman River system suggests that favourable habitat is available for this species; however, expansion to this habitat is blocked by the presence of the St. Mary Reservoir and the Waterton Reservoir and dam.

Another concern for the persistence of St. Mary sculpin is the loss of water flow resulting from impoundment, diversion, and water removal, in combination with frequent drought conditions in southern Alberta. Low water level decreases habitat availability and increases water temperature. Water temperature is one of the most important factors affecting sculpin distribution in the Milk River.

Management

In 1997, Alberta's *Wildlife Act* was amended to allow designation, protection and recovery of *Threatened* and *Endangered* fish. Within two years of listing this species, a provincial recovery team, including Alberta Sustainable Resource Development and other stakeholders, will prepare a provincial recovery plan to set goals, objectives, strategies, and management actions needed to guide recovery for this species over the next five years. Initial conservation efforts will focus on monitoring, using a multi-species approach integrated with other species at risk in the Milk River system, and defining rescue potential from the adjacent Montana population.

CHANTAL PATTENDEN

DESCRIPTION

The St. Mary's sculpin is a small freshwater fish species. As with most sculpins, this species is large-headed and heavy bodied, with no airbladder, and a body that tapers from head to tail. The dorsal and pelvic fins have protective spines. The maximum length of the St. Mary sculpin in Alberta is 114 mm.

Spawning season may range from February to August depending on the location. Males appear at nest sites before females, and remain nearby for up to several weeks after egg laying. It is thought that males remain nearby to keep nests free of silt and debris rather than to guard the eggs. Both sexes reach sexual maturity at approximately 23 months. Diet consists largely of aquatic insect larvae usually found on the upstream side of rocks.

The taxonomy of the St. Mary sculpin is complex and unresolved. Genetic studies suggest that it is an unrecognized taxon within the western mottled sculpin complex.

Alberta: In process (Threatened status recommended in 2004)
Canada: Evaluation in process

Elsewhere: Taxonomic uncertainty makes determination of designations in other localities impossible.

MARK STEPHENS

DESCRIPTION

STONECAT (*Noturus flavus*)

The stonecat has a small (<203 mm) catfish-type body with a very long, low and inconspicuous adipose fin, separated from the tail by a tiny notch. The upper jaw is much longer than the lower jaw and there are no serrations on the pectoral spines. The tail is square with the upper and lower margin whitish in color. Stonecats have a yellowish brown color that is faintly mottled with darker brown.

The stonecat is the latest maturing and longest-lived 'madtom' species. Females reach maturity at around 90-134 mm (3-4 years). Males are at least 85 mm (3+ years) at maturity. The stonecat spawns from April to August, when temperature exceeds 25°C. Female fecundity increases with body size; hence, larger females will lay more eggs. The mass of sticky eggs is guarded by the male until hatching. The stonecat is a nocturnal, opportunistic, bottom feeder, using its sensitive barbells to search for food.

Habitat

In Alberta, this species is found in deep boulder pools or rocky bottoms in fast moving rapids and riffles. The stonecat is a nocturnal feeder, spending most days hiding beneath cobble and boulder substrates. Water conditions preferred by the stonecat range from clear to turbid, though it is intolerant of both fast current in high gradient systems and silt-bottomed, low gradient systems.

Distribution

Most of the stonecat distribution occurs south of the Canada-United States international border, extending south from the St. Lawrence River, to western North Carolina, to northern Mississippi, and west to Montana. In Canada, the stonecat is native to the Great Lakes, their tributaries, and the main rivers of southern Ontario and Quebec. In Alberta, the species is found in the mid and lower Milk River, as well as the lower North Milk River. In Manitoba, the stonecat is native to the Red, Assiniboine and Brokenhead river systems. In Saskatchewan this fish is only found in the Frenchman River. This species is generally a good natural disperser.

Population

There is virtually no information on the population size of the stonecat in Alberta. It is likely that the population size increased since the construction of the St. Mary Canal built in 1917, when water was diverted from the St. Mary River to the North Milk River. Currently, the population is considered stable but of low abundance. It is difficult to assess population size based on existing information, however, because sampling has been done during daylight hours when stonecats are generally hiding beneath rocks and are very difficult to locate.

Threats

The largest threat to the stonecat is low water during drought conditions, usually accentuated by local water removal and irrigation. Severe drought conditions result in stonecats being isolated in small pools where low oxygen levels and high water temperature can reach dangerous levels.

Management

In 1997, Alberta's *Wildlife Act* was amended to allow designation, protection and recovery of *Threatened* and *Endangered* fish. Within two years of listing this species, a provincial recovery team, including Alberta Sustainable Resource Development and other stakeholders, will prepare a provincial recovery plan to set goals, objectives, strategies, and management actions needed to guide recovery for this species over the next five years. Initial conservation efforts will focus on determining distribution and abundance in relation to water flow; which will be integrated with inventory on other species at risk in the Milk River system.

Recently, the Fish and Wildlife Division of Alberta Sustainable Resource Development has commissioned ongoing surveys for this and other species in the Milk River watershed. Identification of habitat requirements for the stonecat through these surveys is critical for the continued survival of this species in Alberta.

STATUS

Alberta: In process (Threatened status recommended in 2004)
Saskatchewan: S2S3
Manitoba: S5
Ontario: S4
Québec: S3
Canada: N4
U.S.: N5
Global: G5

POLICY STATEMENT

for Alberta's Endangered Species Conservation Committee

Alberta's Endangered Species Conservation Committee (ESCC) is comprised of a balance of members from stakeholder groups representing resource-based land users, corporate and government land managers, conservation organizations and university scientists. Our mandate is to advise the Minister of Sustainable Resource Development on matters relating to the identification, conservation and recovery of species at risk in Alberta. We feel these principles are important in a provincial and federal context. We are operating from a core set of principles that include the following:

one | The identification, conservation and recovery of threatened and endangered species, as well as prevention of extinction of species, are shared values of this committee and Albertans in general.

two | The biological status of species should be determined by independent scientists using the best science available in an open and transparent process.

three | In accordance with the precautionary principle as stated in the *Accord for Protection of Species at Risk in Canada*, where the balance of scientific information indicates a species is at risk, conservation and protective measures will be taken.

four | Government has the responsibility to coordinate and facilitate the recovery of species. However, the success of a recovery plan depends on the knowledge and commitment of organizations and individuals who own, manage and use the land. Recovery teams must include these landowners/land managers.

five | Prevention and recovery programs for species at risk will be pursued by encouraging voluntary and cooperative, recovery and management efforts that cost-share on an equitable basis.

six | This committee encourages the elimination of any government policy disincentives to landowners to protect species at risk.

DAVID HAYNDUK

TAIL CREEK, ALBERTA

Alberta Agriculture,
Food and Rural Development
www.agric.gov.ab.ca

Alberta Association of Municipal
Districts and Counties
www.aamdc.com

Alberta Beef Producers
www.albertabeef.org

Alberta Conservation Association
www.ab-conservation.com

Alberta Sustainable Resource
Development
www3.gov.ab.ca/srd

Alberta Fish and Game Association
www.afga.org

Alberta Forest Products Association
www.albertaforestproducts.ca

Alberta Irrigation Projects Association
www.aipa.org

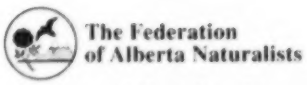
Alberta Native Plant Council
www.anpc.ab.ca

Alberta Energy
www.energy.gov.ab.ca

Calgary Zoo
www.calgaryzoo.org

Canadian Association
of Petroleum Producers

Canadian Association
of Petroleum Producers
www.capp.ca



Federation of Alberta Naturalists
www.fanweb.ca

Special Areas Board
www.specialareas.ab.ca

The Wildlife Society - Alberta Chapter
www.albertadirectory.com/actws

Treaty 8 First Nations of Alberta

www.treaty8.org

University of Alberta
Dept. of Biological Sciences
www.biology.ualberta.ca

University of Calgary
Dept. of Biological Sciences
**www.ucalgary.ca/UofC/
faculties/SC/BI**

Western Stock Growers' Association

Western Stock Growers' Association
www.wsga.ca

REPORT OF

ALBERTA'S ENDANGERED SPECIES CONSERVATION COMMITTEE

JUNE 2004